

Agent's reference: 05-483-B

IN THE UNITED STATES RECEIVING OFFICE (RO/US)

In re Application of:)
Kyoung Dok YUN) Group Art Unit: TBA
Serial No.: 10/560,512) Examiner: TBA
Filed: December 13, 2005)
For: Apparatus For Improving Reception)
Sensitivity of Base Transceiver Station)

TRANSMITTAL LETTER

Mail Stop PCT
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

Dear Sirs:

In regard to the above-identified application we are transmitting herewith the attached:

- 1) International Preliminary Report on Patentability.
- 2) **CERTIFICATE OF MAILING BY “EXPRESS MAIL” UNDER 37 CFR § 1.10:** The undersigned hereby certifies that this Transmittal Letter and the paper, as described hereinabove, are being deposited with the United States Postal Service with sufficient postage as “Express Mail Post Office to Addressee” in an envelope addressed to: Mail Stop PCT, Commissioner for Patents, P.O. Box 1450, Alexandra, Virginia, 22313-1450, on this 27th day of February, 2006, Express Mail No. **EV757106496US**.

Respectfully submitted,

By Robert J. Irvine III
Robert J. Irvine III
Registration No. 41,865
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PATENT COOPERATION TREATY
PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY
(Chapter I of the Patent Cooperation Treaty)

(PCT Rule 44bis)

| | | | |
|--|--|--|------------------|
| Applicant's or agent's file reference FE241484 | FOR FURTHER ACTION | | See item 4 below |
| International application No. PCT/KR2004/001852 | International filing date (<i>day/month/year</i>) 23 July 2004 (23.07.2004) | Priority date (<i>day/month/year</i>) 24 July 2003 (24.07.2003) | |
| International Patent Classification (8th edition unless older edition indicated) See relevant information in Form PCT/ISA/237 | | | |
| Applicant UTStarcom Korea Limited | | | |

1. This international preliminary report on patentability (Chapter I) is issued by the International Bureau on behalf of the International Searching Authority under Rule 44 bis.1(a).
2. This REPORT consists of a total of 4 sheets, including this cover sheet.

In the attached sheets, any reference to the written opinion of the International Searching Authority should be read as a reference to the international preliminary report on patentability (Chapter I) instead.

3. This report contains indications relating to the following items:

| | |
|-------------------------------------|---|
| <input checked="" type="checkbox"/> | Box No. I Basis of the report |
| <input type="checkbox"/> | Box No. II Priority |
| <input type="checkbox"/> | Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability |
| <input type="checkbox"/> | Box No. IV Lack of unity of invention |
| <input checked="" type="checkbox"/> | Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement |
| <input type="checkbox"/> | Box No. VI Certain documents cited |
| <input type="checkbox"/> | Box No. VII Certain defects in the international application |
| <input type="checkbox"/> | Box No. VIII Certain observations on the international application |

4. The International Bureau will communicate this report to designated Offices in accordance with Rules 44bis.3(c) and 93bis.1 but not, except where the applicant makes an express request under Article 23(2), before the expiration of 30 months from the priority date (Rule 44bis .2).

| | |
|---|--|
| Date of issuance of this report 30 January 2006 (30.01.2006) | |
| The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland Facsimile No. +41 22 740 14 35 | Authorized officer Philippe Becamel Telephone No. +41 22 338 70 90 |

COPY FOR IB

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

RECEIVED

31 AUG 2004

PCT WIPO PCT

To:
YOON, Jee Hong

Hannuri Bldg. 219 Naeja-dong, Chongno-gu, Seoul 110-053,
Republic of Korea

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

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|---|
| Date of mailing (day/month/year) 24 AUGUST 2004 (24.08.2004) |
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|---|--|--|--|
| Applicant's or agent's file reference FE241484 | | FOR FURTHER ACTION See paragraph 2 below | |
| International application No. PCT/KR2004/001852 | International filing date (day/month/year) 23 JULY 2004 (23.07.2004) | Priority date(day/month/year) 24 JULY 2003 (24.07.2003) | |
| International Patent Classification (IPC) or both national classification and IPC IPC7 H04B 7/155 | | | |
| Applicant UTStarcom Korea Limited et al | | | |

1. This opinion contains indications relating to the following items:

- Box No. I Basis of the opinion
- Box No. II Priority
- Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- Box No. IV Lack of unity of invention
- Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- Box No. VI Certain documents cited
- Box No. VII Certain defects in the international application
- Box No. VIII Certain observations on the international application

2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.
For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

| | |
|--|--|
| Name and mailing address of the ISA/KR  Korean Intellectual Property Office 920 Dunsan-dong, Seo-gu, Daejeon 302-701, Republic of Korea Facsimile No. 82-42-472-7140 | Authorized officer JEON, Jong Seong Telephone No. 82-42-481-5948 |
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WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/KR2004/001852

Box No. I Basis of this opinion

1. With regard to the **language**, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

This opinion has been established on the basis of a translation from the original language into the following language _____, which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).

2. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:

a. type of material

a sequence listing
 table(s) related to the sequence listing

b. format of material

in written format
 in computer readable form

c. time of filing/furnishing

contained in the international application as filed.
 filed together with the international application in computer readable form.
 furnished subsequently to this Authority for the purposes of search.

3. In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.

4. Additional comments:

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.

PCT/KR2004/001852

Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

| | | | |
|-------------------------------|--------|------|-----|
| Novelty (N) | Claims | 1-3 | YES |
| | Claims | NONE | NO |
| Inventive step (IS) | Claims | NONE | YES |
| | Claims | 1-3 | NO |
| Industrial applicability (IA) | Claims | 1-3 | YES |
| | Claims | NONE | NO |

2. Citations and explanations :

1. Citations

D1 : US6125109
 D2 : EP0632600
 D3 : WO03026157

2. Explanations

Inventive step of the invention can be denied by one or a combination of two of above documents because of following reasons.

The invention descloses a transmission/reception apparatus that comprises a duplexer and a SAW filter and LNA and antennas. The object of the invention is to suppress transmission signals interference with the reception path by use of bandpass characteristics of the SAW filter.

In comparison with the documents D1 through D3, D1 discloses a transceiver apparatus comprising a SAW filter in order to eliminate or suppress out-of-band interference signals within the reception signal, then to enhance the reception sensibility in the transmission/reception apparatus. D2 and D3 also have similar technical idea to the invention.

So, it will not be difficult for a skilled person in the art to invent the present invention from the disclosure of the D1 through D3.